



Foster a Fully Integrated Multi-Use Pedestrian and Bicycle System

ACTIVITY PURPOSE AND OVERVIEW

The key for any community to attain a useful and enjoyable pedestrian and bicycle system is to plan for and implement all the necessary aspects of a complete pedestrian and bicycle system. The varying needs and interests of pedestrians, bicyclists, and other users are addressed through these different components. Included in the list of basic components of a complete system are the following:

- ◆ A connected and complete sidewalk system;
- ◆ A useful and enjoyable multi-use pathway system;
- ◆ A developed on-street bike system;
- ◆ Provision for various amenities for pedestrians, bicyclists, and other users;
- ◆ Adequate rehabilitation and maintenance of the existing system ;
- ◆ Expansion of the system as the community and population expands.

Each component of the system is necessary. Without one component, or if one component is better developed than others, the users of the system will not benefit as much as when such a system is balanced among the various components.

It is imperative that the City of Lincoln and Lancaster County develop a pedestrian and bicycle system that is truly multi-modal in nature. What this entails is the development of a system that not only provides for both pedestrians and bicyclists, but also provides for user friendly connections and a very high level of maintenance. Expectations should be such that residents in our community will know that they can walk, run, or bike to and from anywhere in the city safely and efficiently.

This will require a fundamental shift in priorities from developing a recreational path system to expecting and achieving a complete system that contains the necessary connections, the needed maintenance and rehabilitation, the user amenities, and the desired expansion to provide a pedestrian and bicycle system that can be used by commuters, those running daily errands, and recreational users alike.

Lincoln has developed a multi-use path system over the years that is a great resource for the people of Lincoln and Lancaster County. However, this is not yet a complete pedestrian and bicycle system. The city's neighborhoods and commercial developments are not designed to be pedestrian or bicycle friendly. There are needed connections in the path system that currently present glaring gaps in the system. On-street bicycle facilities are underdeveloped. The city's sidewalk system is in need of accelerated and continued repair. And there is a lack of funding for maintenance and rehabilitation of the existing path system.

The existing multi-use path system should be used as a solid foundation from which Lincoln can build a more complete and user friendly system, but much work needs to be done. To achieve a more complete pedestrian and bicycle system, there are four areas of need that must be addressed:

- ◆ Provide adequate **pedestrian connections** by developing a comprehensive sidewalk system that is maintained at a high level, improves intersections for pedestrians by applying various crosswalk amenities, and designs new streets and developments to be pedestrian friendly.
- ◆ Immediately address the vast amount of necessary **rehabilitation** projects of the existing path system, and provide the necessary annual budget support for continued maintenance programs. In addition, further develop the multi-use path system so that it is **expanded** aggressively to complete important connections and to serve new areas of the city as well as aggressively build needed grade separations.
- ◆ **On-street bicycle facilities** must become much more developed in order to provide a more complete system that complements the path system and provides facilities for a wider range of users. The existing on-street bike route system must be better signed and advertised so that both current and potential users can be more informed and better served. The development of a bike lane system should be accomplished in order to add another level of bicycle facilities and to provide needed connections within the system that currently are not available. Finally, other options and ideas such as bike boulevards should be considered and attempted to further develop the bicycle system.
- ◆ **Amenities** such as strategically located bike lockers and racks in activity centers, improved signing and maps for pedestrians and bicyclists, and constructing trailhead facilities must be developed and supported as part of a more user friendly system.

Meeting such needs involves providing increased funding for each of these major need areas. A needs assessment is provided in this write-up. Specific maintenance and grade separation projects are listed as examples of needed improvements. Also provided are more general funding



needs for such items as sidewalk replacement and rehabilitation, the development of a bike lane program, and pedestrian and bicycle amenities. It is imperative to identify the needs and develop the strategies to address those needs in the context that this is an interconnected system for pedestrians, bicyclists, and other users all of which have various and diverse needs. This effort also requires staff to actively adjust current programs and develop new programs that best serve the pedestrians, bicyclists, and other users of the system.

ACTIVITY DESCRIPTION

This section reviews four main areas of need of the pedestrian and bicycle system. If our community is to attain an integrated multi-use pedestrian and bicycle system these needs must be met. They are presented in the following order:

- ◆ Improve Pedestrian Connections and Service Levels
- ◆ Properly Rehabilitate, Maintain, and Expand the Multi-Use Path System
- ◆ Develop On-Street Bicycle Facilities
- ◆ Provide Amenities for Pedestrian and Bicycle Users

Improve Pedestrian Connections and Service Levels

One of the most vital pieces of the pedestrian/bicycle system is the sidewalk system. Often overlooked as mundane or trivial, sidewalks are most often the only connection into and out of neighborhoods and activity centers besides roadways, if they exist at all. Thus the existence, location, and quality of sidewalks throughout the community is integral for any pedestrian and bicycle system to function at a high level.

There are a number of ongoing local attempts to improve the sidewalk network in Lincoln, all of which should be continued and supported strongly, if not expanded and given increased funding support.



Sidewalk Maintenance and Repair Program

A Sidewalk Maintenance and Repair Program is currently part of the City of Lincoln Capital Improvements Program (CIP). This program's intent is to address the need to rehabilitate approximately 10% of the nearly 1,700 miles of sidewalk throughout Lincoln. Prior to the 2003-2004 fiscal year, \$250,000 had been allocated to this program annually. Such a funding level meant that it would take 36 years to repair the identified \$9 million of needed sidewalk

repair throughout the city. This funding amount was increased to \$1 million in FY 2003-2004, and it is planned that this amount will remain at \$1 million per year throughout the current 6-year CIP. This additional funding will help address the \$9 million in needed repairs. However, such a level of funding will be needed beyond the 6-year CIP planning period to fully address all the needs, especially with additional segments of sidewalk falling into disrepair during this time period.

Also, recent changes in ADA requirements have added to the cost of replacing handicap accessible curb ramps as part of the sidewalk replacement program. This will further diminish the buying power of \$1 million annually for this program. This program should be continued into the future beyond the 6-year CIP horizon, should be funded at a minimum at the \$1 million per year level, and should be considered for additional funding to ensure needed repairs are completed in a timely manner.

Sidewalks Required on Both Sides of Streets

Development of the Lincoln pedestrian system is aided by the local requirement to construct sidewalk facilities on both sides of a street during the subdivision process and when road construction projects take place. Language in Section 26.23.095 of the Subdivision Ordinance states the following:

"Concrete sidewalks shall be constructed in pedestrian ways and on both sides of all streets, including collector and major streets, in compliance with applicable design standards of the city."

This requirement should continue to be enforced, and attempts to waver from this standard should be avoided. There may be instances, such as in the Community Unit Plan (CUP) process, where a variance may be granted.

Pedestrian Needs Addressed in Multi-Modal Subarea Plans

There are gaps in the pedestrian system and those breakdowns must be identified and addressed. The difficulty in addressing those needs rests in identifying exactly where these gaps exist, as well as in addressing the complete pedestrian needs of the entire city. This challenge can be overcome with the implementation of subarea studies that look at pedestrian needs in a specific area of the city. This topic area is addressed in full in the multi-modal transportation subarea plan section of this report. With detailed inventories of specific neighborhoods and developments, the gaps and needs of the pedestrian system can be comprehensively identified and therefore addressed adequately. Such efforts need to be conducted and are supported by the Multi-Modal Transportation Task Force.

Multi-Modal Oriented Design

There is a need to design new areas of the city in a more multi-modal, and more specifically, pedestrian friendly manner before construction of a new office, commercial, or residential area begins. As with pedestrian subarea studies, multi-modal oriented design is a topic that is addressed in detail in another section of this report. For our purposes here, the pedestrian net-

work throughout the city will be enhanced greatly if pedestrian needs, along with bicycle and transit needs, are seriously considered in new developments so that we no longer continue to build less than adequate pedestrian friendly neighborhoods and activity centers. Increased connectivity and improved level of service for pedestrians can be accomplished through multi-modal oriented design efforts. To do this, new multi-modal oriented design zoning regulations and subdivision regulations need to be developed and implemented so that such efforts may begin.

Pedestrian Friendly Intersection Improvements

While part and parcel of both multi-modal subarea studies and multi-modal oriented design efforts, intersection improvements as directly related to the needs of the pedestrian need to be mentioned here separately. Again, this topic is covered in detail in the pedestrian standards section of this report, but it needs to be highlighted as part of the discussion on enhancing the pedestrian network. Generally the goal for improving intersections for the pedestrian is to increase the level of service (LOS) at intersections for pedestrians as well as making intersections more safe, especially at those intersections that have experienced higher levels of accidents involving pedestrians. Enhanced striping, signing, crossing signals, refuge islands, curb bulb-outs, paving patterns, or total redesign of some intersections or the installation of grade separations are just some of the pedestrian friendly applications that can and should be considered at all intersections.



The City of Lincoln Public Works and Utilities Department does conduct regular crash studies that identify the number and locations of pedestrian-involved accidents throughout the community. In 2001, there were 105 crashes that involved pedestrians in Lincoln. The most frequent types of pedestrian crashes involved vehicles proceeding straight and turning left at intersections. Efforts have been made by the Public Works and Utilities Department to address the needs at intersections that have the most pedestrian related crashes. This is a good starting point for implementing additional pedestrian crossing adaptations to intersections in question.

Properly Rehabilitate, Maintain, and Expand the Multi-Use Path System

The City of Lincoln has developed a very good multi-use path system over the past several decades serving pedestrians, bicyclists, runners, and other users. Having such an existing system is a strength that our community must build off of in order to improve the pedestrian and bicycle system in the future. However, a lack of adequate funding for path rehabilitation, general maintenance, new path construction, and needed grade separations threatens the viability of our existing path system as well as our ability to expand the system as the community grows in the future.

Need for Additional Path Rehabilitation and Maintenance Funding

Although there exists a great foundation for the multi-use path system, there is a dramatic short-fall in funding allocation compared to current needs for path rehabilitation and maintenance.

General maintenance is an ongoing cost that must be funded adequately in order to provide the community the best path system possible. Funding for such needs is used to remove debris from paths, clear snow and ice along school routes and other paved paths, maintain signing, maintain the right of way in which paths are located, and make minor repairs throughout the existing system. This amount of funding for such maintenance will need to increase as the system expands.



In addition, many miles of path are in need of major rehabilitative work, or even replacement, as are existing grade separations along the system. Such major rehabilitative work has not been adequately funded in the past. A \$4 million backlog of immediate needs exists. It is proposed in the 2004-2010 Capital Improvement Program (CIP) that this multi-million major funding need be met through a general obligation (GO) bond issue. Needed major rehabilitation projects include:

- ◆ Replacement of the Superior Street Trail
- ◆ Replacement of the Connector Trail from Superior Street to Cornhusker Highway
- ◆ Replacement of 3 Billy Wolff Trail Underpasses
- ◆ Painting of the Highway 2 Bridge
- ◆ Replacement of 1 Wilderness Park Bridge

Currently the Parks and Recreation Department, which is responsible for the maintenance of the path system, receives \$10,000 in City General Revenue funds for such work. Staff from the Parks and Recreation Department has determined that this funding amount needs to be \$100,000 per year in present day dollars in order to adequately deal with the annual rehabilitation and replacement needs that face the path system. This is in addition to the \$4 million in immediate rehabilitation needs that the Parks and Recreation Department has identified.

Without the necessary immediate and continuing funding for rehabilitation and maintenance needs, it will be impossible for Lincoln to adequately maintain its path system, especially given the fact that the system continues to grow and the needs of the system continue to increase. This will become even more apparent if the rate of new path construction increases.



New Path Construction

There are approximately 73 miles of existing multi-use paths inside Lincoln city limits (concrete surface and limestone surface). Another 9 miles of completed paths exist in the Tier I near term growth area outside of the city limits. This growth area is a 40 square mile area which can reasonably expect urban services within the next 25 years. Urban services such as multi-use paths that are planned in the Lincoln-Lancaster County Comprehensive Plan, along with other urban services such as water, sewer, and roads will be needed as urbanization occurs.

The approved Comprehensive Plan contains a plan for expansion of the path system. While 82 miles of multi-use paths have been constructed within Lincoln city limits and the Tier I near term growth area, over 100 miles of additional paths are identified in these areas in the Comprehensive Plan but they are not yet built. These additional planned paths are needed to complete the system intended to serve the expanding urban area over the next 25 years. Current funding levels are not adequate to construct these planned paths. At the current rate of path construction it will take 45 years to complete the planned system, not 25 years.

The City of Lincoln Parks and Recreation Department is able to budget approximately \$550,000 a year for the construction of multi-use paths from the following sources:

\$90,000	City General Revenue Funds
\$60,000	Impact Fees
\$100,000	Private Funds
<u>\$300,000</u>	Federal Enhancement Funds
\$550,000	Total Funding

This funding allows for 1.5 to 2 miles of new path construction each year. With the Public Works and Utilities Department constructing approximately 1 mile of new path per year as part their street construction projects, approximately 2.5 miles of total new paths are built each year under current funding levels. At this rate of construction, 62.5 miles of new paths will be constructed over the next 25 years, leaving approximately 50 miles of planned paths unbuilt inside the Lincoln city limits or in the Tier I growth area as identified in the Comprehensive Plan.

In order to construct multi-use paths at a pace that corresponds with the planned needs of the community over the next 25 years, an additional \$600,000 per year in today's dollars is needed in order to build approximately 2 additional miles of new path per year, or 50 additional miles over 25 years. Approximately half of this additional \$600,000 in needed funding could be covered by federal matching funds if the city was successful and aggressive in obtaining such funding. However, the remainder would need to come from local sources, be they private or public, thus indicating a need for an increase in funding priority for multi-use path construction if Lincoln is to be successful in expanding its path system.

Funding for Grade Separations

There are numerous planned but unbuilt grade separations along both the planned and existing path system. They are identified in the Comprehensive Plan. The cost of constructing grade

separations varies widely due to the range of facilities that are built to meet differing needs at different locations. Grade separations can cost as little as \$100,000, for example, if existing natural grades and a box culvert are used for the facility. They also can cost well over \$1 million, especially if the project involves a completely new bridge structure that spans a multi-lane roadway.



Such challenges that come with estimating these costs do not alter the fact that funding for these structures is needed in order to build and complete the type of path system that our community needs and deserves. Grade separations become especially important in areas where pedestrians and bicyclists have not been adequately planned for along roadways or at intersections that favor motorists over pedestrians and bicyclists. A rough average cost for grade separations is \$500,000 per structure. With this amount of additional funding annually, it is recommended that one grade separation be built each year. The following planned grade separations are considered most important and should be constructed as soon as possible when funding becomes available (listing in not in any particular order of priority):

- ◆ North 27th Street Grade Separation
- ◆ South Street Grade Separation at the Rock Island Trail
- ◆ Old Cheney Grade Separation at 16th Street
- ◆ Old Cheney Grade Separation at 32nd Street
- ◆ Highway 2 Grade Separation at Yankee Hill
- ◆ Grade Separation at 84th Street and Highway 6

Currently the Parks and Recreation Department does not have any funding for such projects. If a grade separation is to be constructed, the project must be funded with the existing allocated funding for path construction. Construction of grade separations is often the responsibility of the Public Works Department when roadway projects are completed. This, however, will not provide the necessary funding for all needed crossings.

The Multi-Modal Transportation Task Force recommends that additional funding be allocated to the Parks and Recreation Department for the construction of at least one grade separated facility each year. This will mean at least \$500,000 in additional funding per year is needed. Of this additional funding amount, some may be gained from other state and federal highway funding programs such as safety funding. This is especially true when safety issues are addressed through the construction of a grade separation at locations where at-grade intersections are a concern for pedestrians, bicyclists, and motorists.



Develop On-Street Bicycle Facilities

In order to become a truly multi-modal friendly community, a useful on-street system of routes and facilities for bicyclists is needed. Just as there is a need to build and maintain both the sidewalk and path systems, developing and maintaining on-street bike facilities is important to complete and compliment the system for both pedestrians and bicyclists. Such a system is needed so that bicycling can be a feasible alternative to the automobile, especially for commuting purposes. On-street routes can be more direct and useful for cyclists than paths, and if the community is truly serious about providing additional modal opportunities other than the car, such a system is needed.

On-Street Bike Routes Do Exist

Currently the City of Lincoln has miles of on-street bike routes shown in the Comprehensive Plan. Many of these routes are signed to some degree along the existing street system. While the existence of such an on-street bike route system is a step in the right direction, further development of the system is needed. At the least additional and new signing is needed along with improved dissemination of information to the public, especially bicyclists, that such a system exists and to inform them of where the routes are located.

Implement a Bike Lane Program

The Multi-Modal Transportation Task Force believes an additional step needs to be taken, one that would build off the 2002 example by the Public Works and Utilities Department to inventory bike routes. In 2002, an effort was made by the Lincoln Public Works and Utilities Department to update information on bike route locations. The main objectives of this effort were to promote safety, mobility, and connectivity for bicyclists within the current transportation network. The Multi-Modal Transportation Task Force recommends the creation of a bike lane program as further development of the community's on-street bicycle system.



Bike lanes do the following:

- ◆ Support and **encourage bicycling** as a means of transportation;
- ◆ Help define the **proper use** areas on the road for bicycles and automobiles;
- ◆ Promote a more **orderly flow** of traffic;
- ◆ Encourage bicyclists to ride in the **correct direction**, with the flow of traffic;



- ◆ Give bicyclists a **clear location** to be so they are not tempted to ride on the sidewalk;
- ◆ Remind motorists to **look for cyclists** when turning or opening car doors;
- ◆ Signal motorists that cyclists have a **right to the road**;
- ◆ Reduce the chance that motorists will stray into **cyclist's path** of travel;
- ◆ Make it less likely that passing motorists swerve toward **opposing traffic**;
- ◆ Decrease the **stress level** of bicyclists riding in traffic.

The implementation of bike lanes is not intended to replace multi-use path facilities but rather to complement their use. Bike lanes are not intended to create redundancy in the system either. Instead, bike lanes are intended to be a part of the bicycle system that complement and strengthen the overall ped/bike transportation network. On-street bike routes would continue to be part of the system, although some existing bicycle routes may be evaluated for opportunities to provide bike lanes for the same reasons they were originally chosen to be on-street bike routes. Also, involving the biking community when formally identifying routes to implement bike lanes is imperative to both tap into the knowledge base of the biking community, as well as to create a spirit of cooperation and inclusion in the planning process.

As stated in the Comprehensive Plan, coordination and cooperation with various agencies is important to successful planning and implementation of any transportation program. Placement of bike lane facilities along State highways will be an issue that will need to be worked out with the Nebraska Department of Roads.

Also, coordination with the County Engineer's office will be needed if striped bike lanes and/or widened shoulders for bicycle users are to be implemented on County roadways.



With such a provision added to the overall bicycle system in Lincoln, critical connections and a higher acceptance of bicycling as a legitimate mode of transportation can be attained. It should be noted, however, that with implementation of bike lane facilities comes the necessary financial commitment to not only construct the facilities initially, but also to maintain the lanes at a high level such that the user has a safe facility to bike on for many years. Cost factors must be considered whenever implementation issues are discussed. Basic costs such as right-of-way acquisition, additional pavement construction, removal of or limitations on parking, striping, signing, and long term maintenance all need to be considered as part of a bike lane suitability index and be included in a funding program for bike lane implementation.



The issues of snow removal, street sweeping, and ensuring good pavement condition in the bike lane area are key. When there is debris in the bike lane such as snow, sand and dirt from winter snow and ice removal efforts, a bicyclist is at risk by either losing traction when attempting to travel over and through the debris, or by being forced to swerve out of the bike lane area into the automobile lane of travel. Maintaining adequate pavement and using proper signing and pavement markings is equally important in order to have a safe and useful bike lane system.

Public Education and Information

Another important aspect of any bike lane implementation program is education and public information. As a new type of bicycling facility in the community, both drivers and bicyclists will need to learn the rules of the road as they apply to bike lanes. Dissemination of bike lane information through public announcements, public meetings, and the use of the City/County web page will be needed. Formal training seminars for users, drivers, and administrators will also need to be considered to make sure the community is informed and knowledgeable about the topic. The idea of having a multi-modal coordinator position on city staff to help implement a bike lane program is one that should be considered as well. Much of the planning, education, and administration of a bike lane implementation program could be accomplished through such a position.

Bicycle Boulevards as an Option

A hybrid between bike routes, bike lanes, and multi-use paths that should be considered is the bicycle boulevard. This form of bicycle facility is intended to be attractive to all types of cyclists and it provides neighborhood traffic benefits. There are different types of bicyclists that prefer different types of bicycle facilities. Experienced bicyclists want fast and direct routes with little regard for volume, while casual bicyclists desire quieter streets. Some of these needs can be met through bike routes, others through bike lanes, and still others through multi-use paths. But to accommodate multiple types of users is a challenge that may be answered through bicycle boulevards.



Boulevards contain the advantages of both multi-use paths and on-street routes such as bike lanes, but they don't carry with them the disadvantages. Low vehicle volumes and a lack of conflict with pedestrians and other users that may be on multi-use paths are attributes that attract a wide range of bicyclists to bicycle boulevards. Also, boulevards are relatively inexpensive, especially when compared to the cost of acquiring right of way for a multi-use path or a bike lane since the street facility being used already exists. Selection of the right street for boulevard status is the key.

As explained by the Cal-Berkeley ITS Technology Transfer Program, the ideal boulevard candidate is a two-lane street serving the same origins and destinations as one or more nearby parallel arterial or collector street. The parallel street provides access for through motor vehicle traffic that the boulevard excludes or discourages. The boulevard street should have all stops signs

removed so that the boulevard is a non-stop facility for the bicyclist. Through traffic can be discouraged by breaking up long segments with mandatory turns that admit only bicycles and pedestrians. Normally bike boulevards are signed much like bike routes, but "Bike Boulevard" signs could be used instead. Additional directional and destination signs such as arrows and "To Downtown" as an example, are helpful, as are signs on parallel routes that indicate the existence of a boulevard facility on a separate street.



Bicycle Facilities in Downtown Lincoln and the University

The issue of bicycle facilities in Downtown Lincoln will require careful planning and engineering and will be addressed in the Downtown Master Plan process set to begin in mid-2004. On a related note, coordination and discussion with the University of Nebraska will be needed to help attain full connectivity in both the Downtown and University areas.

Provide Amenities for Pedestrian and Bicycle Users



To become a pedestrian and bicycle friendly community, amenities that serve the users of sidewalks, paths, and on-street bike facilities need to become standard provisions in annual funding programs.

One item that should become a standard throughout the community is the installation of bike racks in activity centers, in parks, along paths, at schools sites, and other locations where appropriate. At only a few hundred dollars each, such an enhancement to the pedestrian and

bicycle system is a very cost effective way to improve the multi-modal friendliness of the community.

A higher level amenity would be the purchase and strategic placement of bike lockers throughout the community. At approximately \$1,500 per locker (which would house 2 bicycles at a time), these amenities are more expensive than bike racks. But if sited appropriately at locations that will provide opportunities for their use, such as in parking facilities at employment centers, the demand for such items will increase along with their usefulness. This will be especially true with the application of multi-modal oriented design standards in activity centers and neighborhoods within which bike lockers will become more useful and be in higher demand.



The construction and availability of trail heads, restrooms, and drinking fountains along the path system, especially as it expands and becomes more interconnected with on-street facilities,



is another area of amenities that needs to be part of the pedestrian and bicycle network. Costs for such facilities vary greatly depending on availability of land, size of the facility in question, and the type of amenities to be provided. The Novartis Trailhead along the MoPac Trail located on 84th Street approximately 4 blocks south of "O" Street is one example of such a facility. A lower cost facility might simply provide a drinking fountain and seating. A higher cost trail head facility would provide user information, restrooms, drinking fountains, and parking. Such facilities will cost additional money, and funding for such facilities is not currently available.

At the high end of pedestrian and bicycle amenities list is the idea of installing a "ped/bike central" facility in a high pedestrian and bicycle use area. Such a facility would provide showers, changing areas, and lockers for those who wish to commute to or visit an activity center by biking, walking, running, in-line skating, etc., instead of driving. While this type of amenity may be further off in the future than others, mostly because it will take time for certain activity centers to be designed and developed as more pedestrian and bicycle friendly so that use levels are high enough to warrant such a facility, it is an idea that should be considered when the opportunity arises and as Lincoln evolves into a pedestrian and bicycle friendly community.



Another amenity that will greatly enhance the user-friendliness of the local pedestrian and bicycle system is the provision for a heightened amount of public outreach and information regarding the system that is available and planned. Many people do not have adequate knowledge of the path system and on-street bike route system that exists today. If our community is to significantly improve the pedestrian and bicycle system, then the public needs to know what efforts are ongoing and what facilities are or will be available. Maps of the system, on paper, on the web, and along the system, are a good starting point. Detailed information in this area is provided in the multi-modal planning, education, and services section of this report. Also, the availability of a multi-modal transportation coordination position would be invaluable to help with a public information and outreach program.

ACTIVITY TIME LINE AND RESPONSIBILITY

Addressing the needs of the pedestrian and bicycle system should begin immediately. Some work items can be implemented immediately while other work items must wait until additional funding is found. Various work tasks will be necessary for the different but interconnected areas of this system. There also will be various public and private efforts involved in this activity to support the development of a truly balanced and interconnected pedestrian and bicycle system.

The following are immediate action items and can be acted on once the Multi-Modal Transportation Study final report is completed. Staff responsibilities are included with each item.

- ◆ The Parks and Recreation Department should move forward with a **bond issue** vote that, if approved, will help fund the backlog of rehabilitation needs on the existing multi-use path system.
- ◆ The Parks and Recreation Department should be provided additional **annual maintenance funding** as part of the annual budget and CIP process to better provide for the needs of the existing and expanding path system. This amount should be \$100,000 a year.
- ◆ City and County public agencies should work with the development community, non-profit service agencies, and private organizations such as the Great Plains Trails Network to **involve all the stakeholders** in the planning and implementation of the pedestrian and bicycle system.
- ◆ All involved city departments, including Parks and Recreation, Public Works and Utilities, and the City/County Planning Department, should aggressively pursue state, federal, and private funding sources for various projects such as path expansion, system-wide amenities, on-street bike facilities, and grade separations.
- ◆ The Public Works and Utilities Department should continue to implement the **Sidewalk Maintenance and Repair Program**. In order to be most effective, this program should be granted increased funding and should be continued on an annual basis.
- ◆ The Public Works and Utilities Department should implement **bike lane facilities** in the Downtown area as directed by the Downtown Master Plan process that will begin during mid-2004.

Less immediate but no less important are the following tasks:

- ◆ Establish a goal to **build 4.5 miles of paths per year** (currently 2.5 miles are built each year on average) and **1 grade separation per year**. With such expanded programming comes the need for additional funding and additional staff to implement the expanded program. The Parks and Recreation and Public Works and Utilities Departments will be the primary focus of this implementation effort. As such, it will be necessary to fund an additional full-time employee at the Parks Planner I or II level in order to accomplish the goal of planning the construction of 2 additional miles of path per year. The Public Works and Utilities Department will also be involved in this effort as it continues to construct paths to the extent possible as part of its roadway construction program, and as part of its in-house design effort for path and grade separation projects. Through the annual budget and CIP process, additional funding should be allocated as needed to accomplish this goal.



- ◆ City staff from the Public Works, Parks, and Planning Departments should develop an implementation program for a **bike lane program** once the bike lane facilities that result from the Downtown Master Plan have had time to be implemented and studied. Funding for an on-street bike facility program should be included in the annual budget and CIP once an implementation program is prepared. The Public Works Department should be the lead agency for this effort. Included in this program should be bike lanes, bike routes, and bicycle boulevards.
- ◆ The Public Works and Utilities Department should continue to address and expand its efforts to address pedestrian needs at **intersection crossings**.
- ◆ A pedestrian and bicycle **amenity program** should be established. Additional funding will be necessary for this effort. The Parks and Recreation Department should be the lead agency.
- ◆ The Planning Department should complete one **multi-modal subarea plan** within 2 years of the completion of this report. Pedestrian and bicycle needs and issues are to be a major component of this effort.
- ◆ Administration and development of the pedestrian and bicycle system should be coordinated under one entity, not by multiple departments.

Long range in nature, and needing a sustained effort over time, are the following suggested work items:

- ◆ Continue the requirement to install **sidewalks on both sides of streets**. This work item will be fulfilled by staff from both the Public Works and Planning Departments.
- ◆ **Multi-modal oriented design standards** should be developed and implemented. The Planning Department should be the lead agency for this effort with participation from various other departments as appropriate and needed.

ACTIVITY RESOURCE NEEDS

Some of the work load that goes along with the action items listed above can be accomplished through existing staff assuming there are significant adjustments in work priorities to emphasize pedestrian and bicycle efforts. The creation of a multi-modal coordination staff person will provide some of the necessary work hours needed to take on many of the work tasks. It should also be noted that a more aggressive path and grade separation construction program will require an additional Parks Planner position in the Parks and Recreation Department as most of the additional technical project review and administration requirements will be the responsibility of the Parks Department.

Continued funding of the Sidewalk Maintenance and Repair Program is needed to successfully attend to the \$9 million in identified sidewalk replacement. The funding level should be \$1

million per year, with the possibility of increased funding to provide more timely repairs of the sidewalk system. Also, this funding should be extended beyond the 6-year Capital Improvement Program horizon time frame since much of the needed repairs will not be addressed during the current 6-year program.

There is also a dramatic need to adequately fund maintenance and rehabilitation needs of the existing path system. Funding, most likely in the form of a bond issue, for an amount of at least \$4 million is needed immediately to allow the city to "catch up" on its major rehabilitative needs on the system. Also, additional annual funding for regular maintenance is needed in the Parks and Recreation Department budget in the amount of approximately \$100,000 per year. Currently the amount allocated for this purpose is only \$10,000. This proposed funding information is included in the attached spreadsheet as part of a 10-year proposed funding program for the bicycle system.

A substantial funding commitment will be needed to construct the planned path system, construct grade separations, develop on-street bike facilities, and provide user amenities as discussed previously. The spreadsheet provided at the end of this document indicates a proposed 10-year funding program for maintaining and improving the pedestrian and bicycle system. Currently the funding provisions for multi-use path construction and maintenance amount to \$660,000 on average per year from various funding sources. The proposed funding program would begin with an annual program cost of over \$2 million. It is proposed that the additional funding needed to accomplish the program will come mainly from a combination of federal, state, and local funding. It is clear that an increased commitment to such a program will be needed at the local level if the program is to be successful.

Proposed 10-Year Ped/Bike Capital Improvement Program

Project No.	Project Title	PROPOSED EXPENDITURES AND FUNDING SOURCES (000's)										TOTAL FOR TEN YEARS (000's)
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	
		FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	
1	Multi-Use Path System Expansion*	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	390 GR 100 RTP 100 PF 60 IF 500 PB 1,150	3,900 GR 1,000 RTP 1,000 PF 600 IF 5,000 PB 11,500
2	Ped/Bike Grade Separations*	300 GR 200 OF 500	300 GR 200 OF 500	300 GR 200 OF 500	300 GR 200 OF 500	300 GR 200 OF 500	300 GR 200 OF 500	300 GR 200 OF 500	300 GR 200 OF 500	300 GR 200 OF 500	300 GR 200 OF 500	3,000 GR 2,000 OF 5,000
3	Path Maintenance and Rehabilitation	4,000 GO 100 GR 4,100	110.5 GR 111	121 GR 121	131.5 GR 132	142 GR 142	152.5 GR 153	163 GR 163	173.5 GR 174	184 GR 184	194.5 GR 195	4,000 GR 1,473
4	Ped/Bike Amenities	30 GR 5 PF 35	30 GR 5 PF 35	30 GR 5 PF 35	30 GR 5 PF 35	30 GR 5 PF 35	30 GR 5 PF 35	30 GR 5 PF 35	30 GR 5 PF 35	30 GR 5 PF 35	30 GR 5 PF 35	300 GR 50 PF 350
5	On-Street Bike Facilities	150 GR 150	150 GR 150	150 GR 150	150 GR 150	150 GR 150	150 GR 150	150 GR 150	150 GR 150	150 GR 150	150 GR 150	1,500 GR 1,500
6	Public Works Path Construction	100 SO 100	100 SO 100	100 SO 100	100 SO 100	100 SO 100	100 SO 100	100 SO 100	100 SO 100	100 SO 100	100 SO 100	1,000 SO 1,000
PROGRAM TOTALS		6,035	2,046	2,056	2,067	2,077	2,088	2,098	2,109	2,119	2,130	24,823
*Additional path and grade separation construction efforts will require an additional Parks Planner position in the Parks and Recreation Department.												
Funding Source Key:		Program Funding Amounts and Sources										
		10-Year Total Annual Average										
GR		\$10,172,500										
PB		\$5,000,000										
OF		\$2,000,000										
PF		\$1,050,000										
GO		\$4,000,000										
IF		\$600,000										
SO		\$1,000,000										
RTP		\$1,000,000										
(Project costs are not adjusted for inflation)		\$24,822,500										



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